

In the Claims:

1-45. (canceled)

46. (new) A mobile time division duplex receiver comprising:

A. an antenna receiving radio signals that include equal time frames that are divided into equal time slots, each time slot includes a first group of data symbols, midamble symbols of a predetermined training sequence that are cyclically time shifted for different broadcast antenna and users, a second group of data symbols, and a guard period, the midamble symbols including a cyclic prefix obtained by copying over the tail end of the cyclically time shifted midamble symbols, the antenna providing received signals representing the data symbols and midamble symbols;

B. filter circuitry having an input coupled to the received signals, the filter circuitry operating to provide channel estimate output signals of a first and second broadcast antennae in response to the midamble symbols, including the cyclic prefix; and

C. space time transit diversity decoder circuitry having inputs connected to the channel estimate output signals.

47. (new) The receiver of claim 46 in which each frame has a duration of 10 ms.

48. (new) The receiver of claim 46 in which each time slot includes 2560 chip times.

49. (new) The receiver of claim 46 in which the first group of data symbols 420 has 1104 chips and corresponds to 69 data symbols for an exemplary spreading factor of 16.
50. (new) The receiver of claim 46 in which the midamble has 16 symbols for an exemplary spreading factor of 16.
51. (new) The receiver of claim 46 in which the second group of data symbols has 1104 chips.
52. (new) The receiver of claim 46 in which the guard period has 96 chips.
53. (new) The receiver of claim 46 in which the midamble symbols have a different cyclic prefix for each broadcast antennae and user.